

(19) World Intellectual Property
Organization
International Bureau



552851

(43) International Publication Date
21 October 2004 (21.10.2004)

PCT

(10) International Publication Number
WO 2004/089424 A1

(51) International Patent Classification⁷: **A61K 49/08**

(21) International Application Number:
PCT/EP2004/003684

(22) International Filing Date: 6 April 2004 (06.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03008456.0 11 April 2003 (11.04.2003) EP

(71) Applicant (for all designated States except US): **BRACCO IMAGING S.P.A.** [IT/IT]; Via E. Folli, 50, I-20134 Milano (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **AIME, Silvio** [IT/IT]; Via E. Folli, 50, I-20134 Milano (IT). **TERRENO, Enzo** [IT/IT]; Via E. Folli, 50, I-20134 Milano (IT). **DELLI CASTELLI, Daniela** [IT/IT]; Via E. Folli, 50, I-20134 Milano (IT). **GIOVENZANA, Giovanni, Battista** [IT/IT]; Via E. Folli, 50, I-20134 Milano (IT).

(74) Agents: **MINOJA, Fabrizio** et al.; Bianchetti Bracco Minoja S.r.l., Via Rossini, 8, 20122 MILANO (IT).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ADDUCTS BETWEEN MAGNETIC RESONANCE SHIFT REAGENTS AND SUBSTRATES CONTAINING EXCHANGEABLE PROTONS FOR "CEST" APPLICATIONS

(57) Abstract: Disclosed are CEST paramagnetic agents comprising a substrate (SH) containing mobile protons bonded to a paramagnetic chelate (SR) containing a metal selected from iron (11) (high-spin configuration), iron (111), cobalt (11), rhodium (11), copper (11), nickel (11), cerium (111), praseodymium (111), neodymium (111), dysprosium (111), erbium (111), terbium (111), holmium (111), thulium (III), ytterbium (III) and europium (111).

WO 2004/089424 A1